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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,619	01/29/2001	Kouichi Nakamura	Q62623	6706

7590

08/27/2002

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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

7

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant No.

09/770,619

Applicant(s)

NAKAMURA, KOUICHI

Examiner

Steven D. Maki

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

Art Unit: 1733

1) Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 lines 8-9 (last two lines) ambiguously describes "the main lug groove [singular]" (lines 1 and 3 of claim 1 each describe plural main lug grooves. In claim 1 lines 8-9 (last two lines), it is suggested to change "the main lug groove" to --each main lug groove--.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5) **Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman (US 3196920) in view of Semonin (US 3467159) and optionally in view of Japan '308 (JP 4-228308) and/or Baus (WO 98/33669).**

Fishman discloses a pneumatic tire having a tread comprising **wide recesses (main lug grooves) 22** disposed in opposing shoulder regions of the tread and **narrow**

Art Unit: 1733

**recesses (narrow grooves) 26** in a central region of the tread for connecting the wide recesses (main lug grooves) wherein the wide recesses (main lug grooves) 22 are arranged so as to provide circumferential phase difference between the opposing tread shoulder regions. The wide grooves 22 have, for example, a width of 1 inch and a depth of 1 inch. The narrow grooves 26 have, for example, a width of ½ inch and a depth of ½ inch. The narrow grooves 26, therefore, have a depth of 50% of the depth of the wide grooves and are thereby "shallow" within the meaning of claim 1. The narrow grooves 26 have a width of 50% of the wide grooves 22. Fishman teaches that noise generated by the tire should be kept to a minimum. Fishman teaches that the tire should not exhibit a high degree of wear. Fishman teaches that the disclosed tire "...does not result in an excessive rate of wear of the tread" (col. 2 lines 55-56). The only difference between the claimed tire and Fishman's tire is the "shallow groove portion" in a shoulder end region inside the main lug groove.

As to claim 1, it would have been obvious to one of ordinary skill in the art to form a shallow groove portion in a shoulder end region inside each main lug groove 22 of the tire of Fishman which is for trucks or other large vehicles in view of (a) Semonin's teaching to form a shallow groove portion (wedge 22) in a main lug groove 16 of a tire for off road equipment such as front loaders *so that deflection of the tire at the shoulders is reduced and lateral stability of the tire is improved* (the groove at the central region of the tread of Semonin, like that of Fishman, being shallow) and optionally in view of (b) Japan '308's suggestion to form a shallow groove portion

Art Unit: 1733

(raised part 4) in a shoulder region inside each lug groove of a pneumatic tire for heavy load *to reduce abnormal wear* (abstract).

As to claim 2, the limitation of the narrow groove depth being 15-30% of the groove depth of the main lug groove would have been obvious in view of (a) Fishman's teaching to use narrow grooves which are "*more shallow*" than the main lug grooves 22 (the narrow groove depth of 50% of main lug groove depth merely being exemplary) and optionally (b) Baus's teaching to provide narrow grooves for connecting main lug grooves in a tire for industrial type tractor or like with a "*shallow depth*" of less than 50% of main lug groove depth (the depth of the central narrow grooves being defined by tie bars having a height of at least 50% of central lug height which is determined by main lug groove depth).

As to claim 3, the limitation of the narrow groove region being 20-40% of the width of the tread portion would have been obvious since as can be seen from figures 1 and 2 of Fishman, the narrow shallow grooves 26 are in a region which less than  $\frac{1}{2}$  (50%) of the tread width.

As to claim 4 (narrow groove width being 35-100% of main lug groove width), note Fishman's example of using a narrow shallow groove 26 having a width of 50% of the width of the main lug groove 26.

As to claim 5, the limitation of the shallow groove portion in the lug groove having a depth of 50-80% of the main lug groove depth would have been obvious in view of Semonin's teaching to use a shallow groove portion depth of 55-60% of the main lug groove depth (the height of the shallow portion is 40-45% of the non-skid depth).

Art Unit: 1733

As to claim 6, the limitation of the shallow groove portion in the lug groove having a length of 20-50% of the main lug groove length would have been obvious in view of (a) the length of the shallow groove portion defined by surface 56 relative to the length of the main lug groove 46 between the central lug 18 and the tread end shown by Semonin in figure 5; it being emphasized that shallow groove portion of Semonin is used in the shoulder to improve lateral stability and optionally in view of (b) the length L1 of the shallow groove portion (raised part 4) of Japan '308 ( $L1 = 0.05 - 0.25$  times tread width TW); this shallow groove portion having length L1 being used in the shoulder to reduce wear.

Remarks

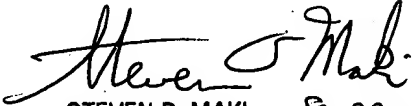
6) The remaining references are cited of interest.

7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
August 23, 2002

  
STEVEN D. MAKI 8-23-02  
PRIMARY EXAMINER  
~~GROUP 1300~~  
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